

REMARKS

Amendments to the Claims

Claim 1 is amended to define that dry catalyst ingredients must have less than 90 % of their pore volume filled with water and to require that drying occurs within the container used to agitate the dry catalyst ingredients. Claims 8-10 are cancelled. New dependant claims 11-16 are added. The amendments to the Claims are supported by the Specification as filed.

Claim Rejections Under 35 U.S.C. 102

Claims 1-4, 6 are rejected under 35 USC 102(b) as being anticipated by Gupta, et al.

The Applicants submit that Gupta, et al. does not contain each and every element of amended Claim 1 and, in fact, is directed to a completely different physical process as compared to the Applicants' present invention. Gupta, et al. discloses a process for making 50 – 400 μm particles of zinc titanate. The zinc titanate particles are prepared by: 1) dry-mixing very fine size particles of zinc oxide, titanium oxide, and a solid inorganic binder (bentonite or kaolinite); 2) spraying the dry-mixed particles with a liquid organic binder (HPMC, PVA, starch, molasses, lignin sulfonate or HPC) falling within a specific viscosity range; 3) removing the wet granules to a tray drier where they are dried to a moisture level of less then 2%; and 4) indurating (calcining) the dried granules during which the zinc oxide and titanium oxide particles react to form zinc titanate and the liquid organic binder is "burned" away leaving a pore structure within the zinc titanate particle. The presence of the solid inorganic binder imparts attrition resistance to the particles by producing a bridging action between the zinc titanate particles. The primary purpose of the liquid organic binder is to provide porosity between the solid catalyst ingredients when it is "burned" away during calcination.

In contrast, Applicants' Claim 1, as currently amended, requires that the dry catalyst ingredients must have less than 90 % of their pore volume filled with water and requires that drying occurs within the container used to agitate the dry catalyst ingredients. Applicants can find no teaching or suggestion in Gupta, et al. for these limitations. In fact, Gupta states that the viscosity of the liquid organic binder is critical, thus, if the catalyst ingredients are dried within the container used to agitate the dry catalyst ingredients (which would greatly affect viscosity) one would not obtain the desired particle size.

Because of the limitations of Claim 1 cannot be found in the disclosure of Gupta, the Applicants respectfully submit that the Examiner withdraw the 35 U.S.C. 102 rejection. Since Claims 2-4 and 6 are dependent on Claim 1 and based on Applicants' arguments above, Applicants submit that these Claims are now in condition for allowance.

Claim Rejections Under 35 U.S.C. 103

A. Claims 1-4, 6-7 are rejected under 35 USC 103(a) as being unpatentable over Rainis.

The Applicants submit that Rainis is directed to the formation of spherical particles by a completely different physical process as that claimed by Applicants, thus it cannot be said that Rainis appears to suggest the Applicants' claimed invention thereby rendering it obvious.

The Examiner's only argument that Applicants' claimed invention is obvious concerns the fact that Rainis discloses a particle size range of 1000 – 5000 microns, while the Applicants' claim a particle size from 20 – 1000 micron.

Rainis discloses a process by which agglomerates are prepared by dispersing alumina and other inorganic materials in a water immiscible liquid with a high speed mixer, mixing an aqueous acidic phase into the dispersion until micro-agglomerates form, lowering the mixing speed to achieve uniform spherical agglomerates, separating the agglomerates from the water immiscible liquid, and drying the agglomerates. This process results in agglomerates having a particle size from 1000 – 5000 microns. As in Gupta, Rainis requires the formed particles to be removed from the container in which they were formed before they are dried. If the Rainis agglomerates were not removed before drying, the water immiscible phase would be driven off before the aqueous phase thereby destroying the dispersion in which Rainis' spherical agglomerates are formed and creating much larger particles as the agglomerates concentrate in the aqueous phase.

Because Rainis does not suggest the Applicants' claimed invention, the Applicants respectfully submit that the Examiner withdraw the 35 U.S.C. 103 rejection. Since Claims 2-4 and 6-7 are dependent on Claim 1 and based on Applicants' arguments above, Applicants submit that these Claims are now in condition for allowance.

B. Claim 7 is rejected under 35 USC 103(a) as being unpatentable over Gupta.

Based on the arguments above and the currently amended Claims, Applicants submit that Claim 7 is in condition for allowance.

- C. Claim 8 is rejected under 35 USC 102(b) as being anticipated by or, in the alternative, under 35 USC 103(a) as obvious over either Gupta, et al. or Rainis.

Claim 8 has been cancelled, thus the Examiner's rejection is mooted.

Based on the foregoing, the Applicants submit that this case is now in condition for allowance and request same.

Respectfully submitted,



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